IMMUNOLOGY

CONTENTS

Vol 93, No 1, January 1998

1 **M. Ryan, G. Murphy, E. Ryan, L. Nilsson, F. Shackley, L. Gothefors, K. Øymar, E. Miller, J. Storsaeter & K. H. G. Mills:** Distinct T-cell subtypes induced with whole cell and acellular pertussis vaccines in children

11 **T. Kawai, H. Shimauchi, J. W. Eastcott, D. J. Smith & M. A. Taubman:** Antigen direction of specific T-cell clones into gingival tissues

20 **M. Kraft, S. Filsinger, K.-L. Krämer, D. Kabelitz, G. M. Hänsch & M. Schoels:** Synovial fibroblasts as target cells for staphylococcal enterotoxin-induced T-cell cytotoxicity

26 **H. Yang & R. M. E. Parkhouse:** Differential activation requirements associated with stimulation of T cells via different epitopes of CD3

33 **A. Roos, E. J. M. Schilder-Tol, M. A. Chand, N. Claessen, F. G. Lakkis, D. W. Pascual, J. J. Weening & J. Aten:** Differential regulation of expression of the MHC class II molecules RT1.B and RT1.D on rat B lymphocytes: effects of interleukin-4, interleukin-13 and interferon-γ

41 **J. M. Brewer, M. Conacher, M. Gaffney, M. Douglas, H. Bluethmann & J. Alexander:** Neither interleukin-6 nor signalling via tumour necrosis factor receptor-1 contribute to the adjuvant activity of Alum and Freund's adjuvant

49 **C. J. Betts & R. A. Wilson:** Th1 cytokine mRNA expression dominates in the skin-draining lymph nodes of C57BL/6 mice following vaccination with irradiated *Schistosoma mansoni* cercariae, but is down-regulated upon challenge infection

55 **P. S. Coulson, L. E. Smythies, C. Betts, N. A. Mabbott, J. M. Sternberg, X.-G. Wei, F. Y. Liew & R. A. Wilson:** Nitric oxide produced in the lungs of mice immunized with the radiation-attenuated schistosome vaccine is not the major agent causing challenge parasite elimination

64 **B. Chua-Intra, J. Ivanyi, A. Hills, J. Thole, C. Moreno & H. M. Vordermeier:** Predominant recognition of species-specific determinants of the GroEs homologues from *Mycobacterium leprae* and *M. tuberculosis*

73 **A. M. Buisman, J. A. M. Langermans & R. van Furth:** Effect of granulocyte-macrophage colony-stimulating factor on the number of leucocytes and course of *Listeria monocytogenes* infection in naive and leucocytopenic mice

80 **Y.-X. Zhao, I.-M. Nilsson & A. Tarkowski:** The dual role of interferon-γ in experimental *Staphylococcus aureus* septicaemia versus arthritis

86 **P. Cornacchione, L. Scaringi, K. Fettucciari, E. Rosati, R. Sabatini, G. Orefici, C. von Hunolstein, A. Modesti, A. Modica, F. Minelli & P. Marconi:** Group B streptococci persist inside macrophages

96 **S. Cuzzocrea, A. P. Caputi & B. Zingarelli:** Peroxynitrite-mediated DNA strand breakage activates poly (ADP-ribose) synthetase and causes cellular energy depletion in carrageenan-induced pleurisy

102 **S. Hirano:** Nitric oxide-mediated cytotoxic effects of alveolar macrophages on transformed lung epithelial cells are independent of the β_2 integrin-mediated intercellular adhesion

109 **L. Speciale, K. Roda, M. Saresella, D. Taramelli & P. Ferrante:** Different endothelins stimulate cytokine production by peritoneal macrophages and microglial cell line

115 **T. Yamazaki & Y. Aoki:** Cathepsin G enhances human natural killer cytotoxicity

122 **H. Shirzadeh, R. C. Burton, J. H. Brien & Y. C. Smart:** Monoclonal antibody anti-NC-2 identifies a second receptor on cells mediating natural cytotoxicity in mice

129 **S. J. Thorpe, C. E. Turner, F. K. Stevenson, M. B. Spellerberg, R. Thorpe, J. B. Natvig & K. M. Thompson:** Human monoclonal antibodies encoded by the V4-34 gene segment show cold agglutinin activity and variable multireactivity which correlates with the predicted charge of the heavy-chain variable region

137 **Editorial acknowledgment**

Vol 93, No 2, February 1998

Review

139 **G. Borland, J. A. Ross & K. Guy:** Forms and functions of CD44

149 **A. González-Fernández & C. Milstein:** Low antigen dose favours selection of somatic mutants with hallmarks of antibody affinity maturation

154 **R. Eren, I. Lubin, D. Terkieltaub, O. Ben-Moshe, A. Zauberman, R. Uhlmann, T. Tzahor, S. Moss, E. Ilan, D. Shouval, E. Galun, N. Daudi, H. Marcus, Y. Reisner & S. Dagan:** Human monoclonal antibodies specific to hepatitis B virus generated in a human/mouse radiation chimera: the Trimera system

162 **D. Zhu, C. van Arkel, C. A. King, S. van Meirvenne, C. de Greef, K. Thielemans, J. Radl & F. K. Stevenson:** Immunoglobulin V_H gene sequence analysis of spontaneous murine immunoglobulin-secreting B-cell tumours with clinical features of human disease

171 **W. S. Varade, J. A. Carnahan, P. D. Kingsley & R. A. Insel:** Inherent properties of somatic hypermutation as revealed by human non-productive V_H6 immunoglobulin rearrangements

177 **E. H. Olesen, A. A. Johnson, G. Damgaard & R. G. Q. Leslie:** The requirement of localized, CR2-mediated, alternative pathway activation of complement for covalent deposition of C3 fragments on normal B cells

184 **X. Wang, A. Circolo, M.-L. Lokki, P. G. Shackelford, R. A. Wetsel & H. R. Colten:** Molecular heterogeneity in deficiency of complement protein C2 type I

192 **M. L. Disis, F. M. Shiota & M. A. Cheever:** Human HER-2/neu protein immunization circumvents tolerance to rat neu: a vaccine strategy for 'self' tumour antigens

200 **H.-O. Ito, T. So, M. Hirata, T. Koga, T. Ueda & T. Imoto:** Tolerogenic activity of polyethylene glycol-conjugated lysozyme distinct from that of the native counterpart

208 **M. C. M. Verschuren, I. L. M. Wolvers-Tettero, T. M. Breit & J. J. M. van Dongen:** T-cell receptor Vδ-Jα rearrangements in human thymocytes: the role of Vδ-Jα rearrangements in T-cell receptor-δ gene deletion

213 **K. A. Sutton, M. N. Vu & M. F. Wilkinson:** Distal V_β promoters transcribe novel T-cell receptor-β transcripts in early development

221 **R. M. Gorczynski, Z. Chen, H. Zeng, L. Gorczynski & E. Terzioglu:** Analysis of cytokine production and Vβ T-cell receptor subsets in irradiated recipients receiving portal or peripheral venous reconstitution with allogeneic bone marrow cells, with or without additional anti-cytokine monoclonal antibodies

230 **M. Yang, Y. Cao & S. S. Mohapatra:** $CD8^+$ T cells inhibit immunoglobulin E synthesis in low responder SJL/J mice

238 **T. Akashi, S. Nagafuchi, K. Anzai, D. Kitamura, J. Wang, I. Taniuchi, Y. Niho & T. Watanabe:** Proliferation of $CD3^+$ $B220^-$ single-positive normal T cells was suppressed in B-cell-deficient *lpr* mice

249 **P. L. Heritage, M. A. Brook, B. J. Underdown & M. R. McDermott:** Intranasal immunization with polymer-grafted microparticles activates the nasal-associated lymphoid tissue and draining lymph nodes

257 **N. Ishikawa, P. K. Goyal, Y. R. Mahida, K.-F. Li & D. Wakelin:** Early cytokine responses during intestinal parasitic infections

264 **P. H. Jakobsen, F. N. Rasheed, J. N. Bulmer, M. Theisen, R. G. Ridley & B. M. Greenwood:** Inflammatory reactions in placental blood of *Plasmodium falciparum*-infected women and high concentrations of soluble E-selectin and a circulating *P. falciparum* protein in the cord sera

270 **E. Medina & R. J. North:** Resistance ranking of some common inbred mouse strains to *Mycobacterium tuberculosis* and relationship to major histocompatibility complex haplotype and *Nramp1* genotype

275 **O. Takeichi, I. Saito, Y. Okamoto, T. Tsurumachi & T. Saito:** Cytokine regulation on the synthesis of nitric oxide *in vivo* by chronically infected human polymorphonuclear leucocytes

281 **S. Ying, L. T. Barata, Q. Meng, J. A. Grant, J. Barkans, S. R. Durham & A. B. Kay:** High-affinity immunoglobulin E receptor (FcεRI)-bearing eosinophils, mast cells, macrophages and Langerhans' cells in allergen-induced late-phase cutaneous reactions in atopic subjects

289 **A. Möller, B. M. Henz, A. Grützkau, U. Lippert, Y. Aragane, T. Schwarz & S. Krüger-Krasagakes:** Comparative cytokine gene expression: regulation and release by human mast cells

296 **A. Asea & J. Stein-Streilein:** Signalling through NK1.1 triggers NK cells to die but induces NK T cells to produce interleukin-4

Vol 93, No 3, March 1998

307 **C.-C. Wang & G. A. W. Rook:** Inhibition of an established allergic response to ovalbumin in BALB/c mice by killed *Mycobacterium vaccae*

314 **K. A. Lightbody, R. M. Girvin, D. A. Pollock, D. P. Mackie, S. D. Neill & J. M. Pollock:** Recognition of a common mycobacterial T-cell epitope in MPB59 of *Mycobacterium bovis*

323 **I. Frolov, Y. Houri-Hadad, A. Soskolne & L. Shapira:** *In vivo* exposure to *Porphyromonas gingivalis* up-regulates nitric oxide but suppresses tumour necrosis factor-α production by cultured macrophages

329 **T. Bartels, F. Steinbach, G. Hahn, H. Ludwig & K. Borchers:** *In situ* study on the pathogenesis and immune reaction of equine herpesvirus type 1 (EHV-1) infections in mice

335 **D. M. Haig, C. J. McInnes, J. Thomson, A. Wood, K. Bunyan & A. Mercer:** The orf virus OV20.0L gene product is involved in interferon resistance and inhibits an interferon-inducible, double-stranded RNA-dependent kinase

341 **A. G. Doyle, L. Ramm & A. Kelso:** The $CD4^+$ T-cell response to protein immunization is independent of accompanying IFN-γ-producing $CD8^+$ T cells

350 **T. Sareneva, S. Matikainen, J. Vanhatalo, K. Melén, J. Pelkonen & I. Julkunen:** Kinetics of cytokine and NFAT gene expression in human interleukin-2-dependent T lymphoblasts stimulated via T-cell receptor

358 **L. M. Osorio, M. Rottenberg, M. Jondal & S. C. Chow:** Simultaneous cross-linking of CD6 and CD28 induces cell proliferation in resting T cells

366 **M. E. Hamel, E. Noteboom & A. M. Kruisbeek:** Non-responsiveness of antigen-experienced CD4 T cells reflects more stringent co-stimulatory requirements

376 **A. von Bonin, S. Ehrlich & B. Fleischer:** The transmembrane region of CD2-associated signal-transducing proteins is crucial for the outcome of CD2-mediated T-cell activation

383 **P. C. Wever, H. J. J. van der Vliet, L. H. A. Spaeny, A. M. Wolbink, F. N. J. van Diepen, C. J. Froelich, C. E. Hack & I. J. M. ten Berge:** The $CD8^+$ granzyme B^+ T-cell subset in peripheral blood from healthy individuals contains activated and apoptosis-prone cells

390 **M. Lindauer, W. Rudy, B. Gückel, M. v. K. Doeberitz, S. C. Meuer & U. Moebius:** Gene transfer of costimulatory molecules into a human colorectal cancer cell line: requirement of CD54, CD80 and class II MHC expression for enhanced immunogenicity

398 **R. Gugasyan, A. Coward, L. O'Connor, K. Shortman & R. Scollay:** Emigration of mature T cells from the thymus is inhibited by the imidazole-based compound 2-acetyl-4-tetrahydroxybutylimidazole

405 **H. D. de Silva, I. R. Van Driel, N. La Gruta, B. H. Toh & P. A. Gleeson:** $CD4^+$ T cells, but not $CD8^+$ T cells, are required for the development of experimental autoimmune gastritis

409 **T. Kizaki, T. Ookawara, S. Oh-ishi, Y. Itoh, K. Iwabuchi, K. Onoé, N. K. Day, R. A. Good & H. Ohno:** An increase in basal glucocorticoid concentration with age induces suppressor macrophages with high-density FcγRII/III

415 **M. M. Whalen & C. B. Green:** Lysis-sensitive targets stimulate an elevation of cAMP in human natural killer cells

421 **S. B. Laursen, T. S. Dalgaard, S. Thiel, B.-L. Lim, T. V. Jensen, H. R. Juul-Madsen, A. Takahashi, T. Hamana, M. Kawakami & J. C. Jensenius:** Cloning and sequencing of a cDNA encoding chicken mannan-binding lectin (MBL) and comparison with mammalian analogues

431 **U. Holmskov, J. C. Jensenius, I. Tornøe & P. Løvendahl:** The plasma levels of conglutinin are heritable in cattle and low levels predispose to infection

437 **S. D. Wainwright, K. L. Simpson & C. H. Holmes:** Calreticulin associates with non-HLA-A,-B class I proteins in the human choriocarcinoma cell lines JEG-3 and BeWo

Vol 93, No 4, April 1998

447 **S. M. Sparshott & E. B. Bell:** Lymphocyte trafficking: CD4 T cells with a 'memory' phenotype ($CD45RC^-$) freely cross lymph node high endothelial venules *in vivo*

455 **Y.-Q. Li, M. Kobayashi, L. Yuan, J. Wang, K. Matsushita, J.-I. Hamada, K. Kimura, H. Yagita, K. Okumura & M. Hosokawa:** Protein kinase C mediates the signal for interferon-γ mRNA expression in cytotoxic T cells after their adhesion to laminin

462 **B. Liang, Z. Zhang, P. Inserra, S. Jiang, J. Lee, A. Garza, J. J. Marchalonis & R. R. Watson:** Injection of T-cell receptor peptide reduces immunosenescence in aged C57BL/6 mice

469 **F. Dieli, W. Ptak, G. Sireci, G. C. Romano, M. Potestio, A. Salerno & G. L. Asherson:** Cross-talk between $V\beta8^+$ and $\gamma\delta^+$ T lymphocytes in contact sensitivity

478 **P. Borrow, C. J. R. Welsh, P. Tonks, D. Dean, W. F. Blakemore & A. A. Nash:** Investigation of the role of delayed-type-hypersensitivity responses to myelin in the pathogenesis of Theiler's virus-induced demyelinating disease

485 **J. Saloga, A. H. Enk, D. Becker, I. Bellinghausen, S. Kühn & J. Knop:** Active suppression induced by cutaneous exposure to bacterial superantigen is prevented by interleukin-12 treatment *in vivo*

493 **L. K. Siew, J. T. Beech, S. J. Thompson & C. J. Elson:** Effect of T-helper cytokine environment on specificity of T-cell responses to mycobacterial 65 000 MW heat-shock protein

498 **T. Iwasaki, T. Hamano, J. Fujimoto & E. Kakishita:** Regulation of interleukin-6 and interleukin-6R α (gp80) expression by murine immunoglobulin-secreting B-cell hybridomas

505 **J. Copier, P. Potter, S. H. Sacks & A. P. Kelly:** Multiple signals regulate the intracellular trafficking of HLA-DM in B-lymphoblastoid cells

511 **C. M. Gardiner & D. J. Reen:** Differential cytokine regulation of natural killer cell-mediated necrotic and apoptotic cytotoxicity

518 **C. Jorgensen, F. Apparailly, I. Couret, F. Canovas, C. Jacquet & J. Sany:** Interleukin-4 and interleukin-10 are chondroprotective and decrease mononuclear cell recruitment in human rheumatoid synovium *in vivo*

524 **S. Shibata, T. Asano, A. Noguchi, M. Naito, A. Ogura & K. Doi:** Peritoneal macrophages play an important role in eliminating human cells from severe combined immunodeficient mice transplanted with human peripheral blood lymphocytes

533 **A. J. MacDonald, J. Pick, E. Y. Bissonnette & A. D. Befus:** Rat mucosal mast cells: the cultured bone marrow-derived mast cell is biochemically and functionally analogous to its counterpart *in vivo*

540 **M. Morimoto, M. Yamada, N. Arizono & T. Hayashi:** Lactic dehydrogenase virus infection enhances parasite egg production and inhibits eosinophil and mast cell responses in mice infected with the nematode *Nippostrongylus brasiliensis*

546 **T. Hara, Y. Suzuki, S. Nakazawa, H. Nishimura, S. Nagasawa, M. Nishiguchi, M. Matsumoto, M. Hatanaka, M. Kitamura & T. Seya:** Post-translational modification and intracellular localization of a splice product of CD46 cloned from human testis: role of the intracellular domains in O-glycosylation

556 **R. E. Smith, A. M. Donachie, F. H. McLaren & A. McI. Mowat:** Preservation of mucosal and systemic adjuvant properties of ISCOMS in the absence of functional interleukin-4 or interferon-γ

563 **M. Ugozzoli, D. T. O'Hagan & G. S. Ott:** Intranasal immunization of mice with herpes simplex virus type 2 recombinant gD2: the effect of adjuvants on mucosal and serum antibody responses

572 **L. Muhumuza, D. Segre & M. Segre:** Antibodies with idiotypic and anti-idiotypic reactivity (epibodies) in conventional immune responses to dinitrophenylated carriers

581 **M. Mousavi, H. Rabbani, L. Pilström & L. Hammarström:** Characterization of the gene for the membrane and secretory form of the IgM heavy-chain constant region gene (Cμ) of the cow (*Bos taurus*)

589 **H.-M. Kim, K.-S. Kim & E.-H. Lee:** Specific inhibition of immunoglobulin E-mediated allergic reaction using antisense FcεRIα oligodeoxynucleotides

595 **S. Redpath, T. Michaelsen, I. Sandlie & M. R. Clark:** Activation of complement by human IgG1 and human IgG3 antibodies against the human leucocyte antigen CD52

601 **G. B. Sala-Newby, K. M. Taylor, M. N. Badminton, C. M. Rembold & A. K. Campbell:** Imaging bioluminescent indicators shows Ca^{2+} and ATP permeability thresholds in live cells attacked by complement

611 Author and subject indexes for Volume 93